

Protocol: adult_spine_CERVICAL

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	NPW, Seq, Fast
Plane	3-PLANE	SCAN RANGE	
Series Description	LOC	FOV	36.0
SCAN TIMING		Slice Thickness	5.0
Number of Echoes	1	Slice Spacing	5.0
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	None	Freq	256
GATING/TRIGGER		Phase	128
Auto Trigger Type	Off	Freq DIR	Unswap
MULTI-PHASE		NEX	2.00
Seperate Series	0	Phase FOV	1.00
Mask Phase	0	Auto Shim	Off
Mask Pause	0	Phase Correction	No
DIFFUSION		FMRI	
Recon All Images	On	PSD Trigger	Internal
CONTRAST		Slice Order	Interleaved
Contrast Yes/No	No	View Order	Bottom/Up
		# of Repetitions REST	0
		# of Repetitions ACTIVE	0
		SAT	
		Tag Type	None
		TRICKS	
		Pause On/Off	On
		Auto Subtract	0
		Auto SCIC	Off

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T2	FOV	24.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.5
TE	85.0	ACQ TIMING	
Number of Echoes	1	Freq	300
TR	3261.0	Phase	224
Echo Train Length	21	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (P)
IMAGE ENHANCE		NEX	4.00
Filter Choice	None	Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
FMRI		Flow Direction Compensation	Freq
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	2800.0
# of Repetitions ACTIVE	0	TR Max	11000.0
SAT		MULTI-PHASE	
SAT Location	S	Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

SAG T2

SAG T2

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T1	FOV	24.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.5
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	478.0	Phase	224
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	27.78	Fat Shift DIR	Normal (P)
IMAGE ENHANCE		NEX	3.00
Filter Choice	None	# of Acq. Before Pause	0
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV21	2.00
# of Repetitions REST	0	User CV22	1.00
# of Repetitions ACTIVE	0	MULTI-PHASE	
SAT		Seperate Series	0
Tag Type	None	Mask Phase	0
		Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

SAG T1

SAG T1

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, MRF, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	SAG STIR	SCAN RANGE	
SCAN TIMING		FOV	24.0
Flip Angle	160	Slice Thickness	3.0
TE	42.0	Slice Spacing	0.5
Number of Echoes	1	ACQ TIMING	
TR	4081.0	Freq	288
TI	150	Phase	192
Echo Train Length	13	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (P)
IMAGE ENHANCE		NEX	4.00
Filter Choice	None	Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
FMRI		Flow Direction Compensation	Freq
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV21	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	3500.0
# of Repetitions ACTIVE	0	TR Max	15000.0
SAT		MULTI-PHASE	
SAT Location	S	Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

SAG STIR

SAG STIR

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	AX T2	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	100.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	3795.0	Phase	224
Echo Train Length	23	Freq DIR	A/P
Receiver Bandwidth	41.67	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	2.00
Filter Choice	None	# of Acq. Before Pause	0
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	Flow Direction	Slice
Slice Order	Interleaved	Compensation	
View Order	Bottom/Up	USER CVS	
# of Repetitions REST	0	User CV15	2.00
# of Repetitions ACTIVE	0	User CV22	1.00
SAT		TR Min	2800.0
SAT Location	S	TR Max	6000.0
SAT Location	I	MULTI-PHASE	
Tag Type	None	Seperate Series	0
TRICKS		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	DIFFUSION	
Auto SCIC	2	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

AX T2

AX T2

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	MERGE
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	FC, NPW, EDR, Fast, ZIP512
Plane	OBLIQUE	SCAN RANGE	
Series Description	AX MERGE	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	20	Slice Spacing	0.5
Number of Echoes	4	ACQ TIMING	
TR	517.0	Freq	256
Receiver Bandwidth	31.25	Phase	192
IMAGE ENHANCE		Freq DIR	A/P
Filter Choice	None	NEX	2.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	TR Min	400.0
View Order	Bottom/Up	TR Max	800.0
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Seperate Series	0
SAT		Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

AX MERGE

AX MERGE

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	Fast, SS
Plane	OBLIQUE	SCAN RANGE	
Series Description	---OPTIONS---	FOV	22.0
SCAN TIMING		Slice Thickness	5.0
TE	Minimum	Slice Spacing	1.0
TR	Minimum	ACQ TIMING	
Receiver Bandwidth	83.33	Freq	128
IMAGE ENHANCE		Phase	128
Filter Choice	None	Freq DIR	A/P
GATING/TRIGGER		NEX	1.0
Auto Trigger Type	Off	# of Acq. Before Pause	0
FMRI		Phase FOV	1.00
PSD Trigger	Internal	Auto Shim	Auto
Slice Order	Interleaved	Phase Correction	No
View Order	Bottom/Up	USER CVS	
# of Repetitions REST	0	User CV2	240.00
# of Repetitions ACTIVE	0	User CV13	1.00
SAT		TR Min	0.0
Tag Type	None	TR Max	0.0
TRICKS		MULTI-PHASE	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
		DIFFUSION	
		Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

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Ax T1 FSE	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	NPW, EDR, TRF, Fast, MRF
	Plane	OBLIQUE	SCAN RANGE	
	Series Description	Ax T1 FSE	FOV	18.0
	SCAN TIMING		Slice Thickness	3.0
	Flip Angle	160	Slice Spacing	1.0
	TE	Min Full	ACQ TIMING	
	Number of Echoes	1	Freq	288
	TR	500.0	Phase	224
	Echo Train Length	4	Freq DIR	Swap
	Receiver Bandwidth	20.83	Fat Shift DIR	Normal
	IMAGE ENHANCE		NEX	2.00
	Filter Choice	None	Phase FOV	1.00
	GATING/TRIGGER		Auto Shim	Auto
	Auto Trigger Type	Off	Phase Correction	No
	FMRI		USER CVS	
	PSD Trigger	Internal	User CV7	1.00
	Slice Order	Interleaved	User CV15	2.00
	View Order	Bottom/Up	User CV17	1.00
	# of Repetitions REST	0	User CV22	1.00
	# of Repetitions ACTIVE	0	MULTI-PHASE	
	SAT		Seperate Series	0
	SAT Location	A	Mask Phase	0
Tag Type	None	Mask Pause	0	
TRICKS		DIFFUSION		
Pause On/Off	On	Recon All Images	On	
Auto Subtract	0	CONTRAST		
Auto SCIC	2	Contrast Yes/No	No	
OTHERS				
Protocol Notes	Prescribe anterior sat			

Ax T1 FSE

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C Ax T1 FSE F/S	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	500.0	Phase	224
Echo Train Length	4	Freq DIR	Swap
Receiver Bandwidth	20.83	Fat Shift DIR	Normal
IMAGE ENHANCE		NEX	2.00
Filter Choice	None	Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
FMRI		USER CVS	
PSD Trigger	Internal	User CV7	1.00
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV17	1.00
# of Repetitions REST	0	User CV19	1.00
# of Repetitions ACTIVE	0	User CV22	1.00
SAT		MULTI-PHASE	
SAT Location	A	Seperate Series	0
Tag Type	None	Mask Phase	0
Fat/Water Saturation	Fat	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	Yes
OTHERS			
Protocol Notes	Prescribe anterior sat		

+C Ax T1 FSE F/S

+C Ax T1 FSE F/S

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+C Sag T1 FSE F/S	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	NPW, EDR, TRF, Fast, MRF
	Plane	OBLIQUE	SCAN RANGE	
	Series Description	+C Sag T1 FSE F/S	FOV	24.0
	SCAN TIMING		Slice Thickness	3.0
	Flip Angle	160	Slice Spacing	0.5
	TE	Min Full	ACQ TIMING	
	Number of Echoes	1	Freq	320
	TR	478.0	Phase	224
	Echo Train Length	4	Freq DIR	Swap
	Receiver Bandwidth	27.78	Fat Shift DIR	Normal
	IMAGE ENHANCE		NEX	3.00
	Filter Choice	None	# of Acq. Before Pause	0
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	FMRI		Phase Correction	No
	PSD Trigger	Internal	USER CVS	
	Slice Order	Interleaved	User CV15	2.00
	View Order	Bottom/Up	User CV19	1.00
	# of Repetitions REST	0	User CV21	2.00
	# of Repetitions ACTIVE	0	User CV22	1.00
	SAT		MULTI-PHASE	
	SAT Location	A	Seperate Series	0
	SAT Location	S	Mask Phase	0
	SAT Location	I	Mask Pause	0
	Tag Type	None	DIFFUSION	
	Fat/Water Saturation	Fat	Recon All Images	On
	TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	Yes	
Auto Subtract	0			
Auto SCIC	2			

+C Sag T1 FSE F/S

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	MERGE
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe)	Imaging Options	FC, NPW, EDR, Fast, ZIP512, ARC
Plane	CORONAL	SCAN RANGE	
Series Description	COR T2* GRE	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	20	Slice Spacing	0.5
Number of Echoes	4	ACQ TIMING	
TR	427.1	Freq	256
Receiver Bandwidth	31.25	Phase	192
IMAGE ENHANCE		Freq DIR	S/I
Filter Choice	None	NEX	2.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	TR Min	400.0
View Order	Bottom/Up	TR Max	800.0
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Seperate Series	0
SAT		Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	Off	Contrast Yes/No	No

COR T2* GRE

COR T2* GRE